

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A process for permanent and abrasion-resistant colored inscription or marking of a plastic, comprising welding a polymer component to a surface of a plastic under the action of laser light during inscription or marking, where the polymer component is in a layer system which comprises two sub-layer systems ~~layers~~ lying one on top of the other and separated by a support film, wherein each of these two sub-layer systems ~~layers~~ contain ~~may contain~~ one or more layers, where the first sub-layer system ~~layer~~ comprises a plastic which comprises an energy absorber intrinsically or as a layer, and the second sub-layer systems ~~layer~~ applied to a support film serves as inscription medium and comprises a colorant and a polymer component, wherein the polymer component dissolves together with the colorants and is then durably welded to the plastic surface.

2. (Currently Amended) A process according to Claim 1, wherein the first sub-layer systems ~~layer~~ comprises one or more support layers, and the energy absorber is located on or between these support layers.

3. (Previously Presented) A process according to Claim 1, wherein the energy absorber is selected from the group consisting of carbon, metal oxides, silicates, SiO₂ flakes, metal oxide-coated mica and SiO₂ flakes, conductive pigments, sulfides, phosphates, BiOCl, anthracene, perylenes, rylene, pentaerythritol, and mixtures thereof.

4. (Previously Presented) A process according to Claim 1, wherein the plastic layer comprises 0.01 – 20% by weight of energy absorber.

5. (Previously Presented) A process according to Claim 1, wherein the inscription medium essentially consists of a binder, colorants, and polymer component.

6. (Previously Presented) A process according to Claim 5, wherein the binder is selected from the group consisting of cellulose, cellulose derivatives, polyvinyl

alcohols, polyvinylpyrrolidones, polyacrylates, polymethacrylates, epoxy resins, polyesters, polyethers, polyisobutylene, polyamide, polyvinylbutyrals and mixtures thereof.

7. (Previously Presented) A process according to Claim 1, wherein the inscription medium comprises the polymer component in dissolved or particulate form in an amount of 30 – 90% by weight.

8. (Previously Presented) A process according to Claim 1, wherein the polymer component in particulate form has particle sizes of 10 nm – 100 μ m.

9. (Previously Presented) A process according to Claim 1, wherein the polymer component comprises polymers selected from the group consisting of polyesters, polycarbonates, polyolefins, polystyrene, polyimides, polyamides, and polyacetals; or comprises copolymers of the said polymers, or terpolymers of vinyl chloride, dicarboxylates or vinyl acetate or hydroxyl/methyl acrylate or a mixture thereof.

10. (Previously Presented) A process according to Claim 1, wherein the inscription medium comprises organic or inorganic colorants.

11. (Previously Presented) A process according to Claim 1, wherein the inscription medium comprises 0.1 – 30% by weight of colorants, based on the polymer component.

12. (Original) Plastics which have been laser-marked or laser-inscribed by the process according to Claim 1.

13. (Currently Amended) A process according to claim 1, wherein the second sub-layer system ~~layer~~ comprises the colorant in a separate layer from the polymer component.

14. (Currently Amended) A process according to claim 1, wherein the first and second sub-layer systems ~~layers~~ are bonded to one another by welding, adhesive bonding or lamination.

15. (Currently Amended) A process according to claim 1, wherein the first and second sub-layer systems layers are bonded to one another by hot lamination.

16. (Previously Presented) A process according to Claim 1, wherein the inscription medium essentially consists of a binder, colorants, polymer component and additives.

17. (Previously Presented) A process according to Claim 1, wherein sublimation of colorants or melting of glass pigments is not achieved, and wherein the inscription or marking is achieved by homogeneously warming the inscription medium and at the same time avoiding local thermal overheating.

18. (Previously Presented) A process for permanent and abrasion-resistant colored inscription or marking of a plastic, comprising welding a polymer component to a surface of a plastic under the action of laser light during inscription or marking, where the polymer component is in a layer system which comprises

- A) a plastic layer containing two support layers (1') and (1'') which are transparent and stable to laser light and which have a laser-sensitive energy-absorber layer (2) as interlayer, and a layer (3) comprising a polymer-containing inscription medium which comprises a colorant and the polymer component, which layers (1'), (1''), (2) and (3) are bonded to one another to form a unit,
- (B) a plastic layer containing a support layer (1') which is transparent and stable to laser light and which has a laser-sensitive energy-absorber layer (2) thereon, and a layer (3) comprising a polymer-containing inscription medium which comprises a colorant and the polymer component, which layers (1'), (2) and (3) are bonded to one another to form a unit,
- (C) a plastic layer containing two support layers (1') and (1'') which are transparent and stable to laser light and which have a laser-sensitive energy-absorber layer (2) as interlayer, a layer (3') containing the polymer component, and a layer (3'') containing a colorant, which layers (1'), (1''), (2), (3') and (3'') are bonded to one another to form a unit, or
- (D) a support layer (4) which is doped with an energy absorber and a layer (3)

comprising a polymer-containing inscription medium which comprises a colorant and the polymer component, which layers (4) and (3) are bonded to one another to form a unit.

19. (Previously Presented) A process for permanent and abrasion-resistant colored inscription or marking of a plastic, comprising welding a polymer component to a surface of a plastic under the action of laser light during inscription or marking, where the polymer component is in a layer system which comprises

two layers or two sub-layer systems,

wherein the first layer or sub-layer system contains

- I) a plastic layer containing two support layers (1') and (1'') which are transparent and stable to laser light and which have a laser-sensitive energy-absorber layer (2) as interlayer,
- II) a plastic layer containing a support layer (1') which is transparent and stable to laser light and which has a laser-sensitive energy-absorber layer (2) thereon, or
- III) a support layer (4) which is doped with an energy absorber,

wherein the second layer or sub-layer system contains

- I) a layer (3) comprising a polymer-containing inscription medium which comprises a colorant and the polymer component, or
- II) a layer (3') containing the polymer component, and a layer (3'') containing a colorant,

wherein the two layers or two sub-layer systems are bonded to one another to form a unit.

20. (Currently Amended) A process for permanent and abrasion-resistant colored inscription or marking of a plastic, comprising welding a polymer component to a surface of a plastic under the action of laser light during inscription or marking, where the polymer component is in a layer system which comprises two sub-layer systems layers lying one on top of the other and separated by a support film, wherein each of these two sub-layer systems layers may contain one or more layers, where the first sub-layer system layer comprises a plastic which comprises an energy absorber intrinsically or as a layer, and the second sub-layer system layer applied to a support film serves as inscription medium and comprises a colorant and a polymer component, wherein the polymer component dissolves

together with the colorants and is then durably welded to the plastic surface, and wherein the energy absorber is separated from the inscription medium.